WE CLAIM:

1. A method of generating masks for printing a pattern comprising a plurality of features having varying critical dimensions, said method comprising the steps of:

obtaining data representing said pattern;

defining a plurality of distinct zones based on the critical dimensions of said plurality of features;

categorizing each of said features into one of said plurality of distinct zones; and

modifying said mask pattern for each feature categorized into a predefined distinct zone of said plurality of distinct zones.

2. The method of generating masks according to claim 1, wherein said plurality of distinct zones comprises:

a first zone in which features having a critical dimension less than or equal to a first predetermined amount can be imaged utilizing chromeless phase lithography techniques;

a second zone in which features having a critical dimension greater than said first predetermined amount and less than a second predetermined amount can be imaged utilizing a combination of chromeless phase lithography techniques and chrome; and

a third zone in which features having a critical dimensions greater than said second predetermined amount can be imaged utilizing chrome.

3. The method of generating masks according to claim 2, wherein at least one of said features in said first zone is implemented in said mask as adjacent phase edges etched in said a wafer.

4. The method of generating masks according to claim 2, wherein at least one of said features in said second zone is implemented in said mask as adjacent phase edges etched in a

substrate, with chrome patches disposed on an upper surface of said substrate remaining between said adjacent phase edges.

5. The method of generating mask according to claim 4, wherein said chrome patches operate to control the percentage transmission of a light source incident on said mask.

6. The method of generating masks according to claim 2, further comprising the steps of:

compiling the features contained in said first zone, and the chromeless phase components of the features contained in said second region,

generating a first mask for imaging the chromeless phase components contained in said first zone and said second zone,

compiling the chrome components of the features contained in said second zone, and the chrome components of the features contained in said third region,

generating a second mask for imaging the chrome components contained in said second zone and said third zone.

7. An apparatus for generating masks for printing a pattern comprising a plurality of features having varying critical dimensions, said method comprising the steps of:

means for obtaining data representing said pattern;

means for defining a plurality of distinct zones based on the critical dimensions of said plurality of features;

means for categorizing each of said features into one of said plurality of distinct zones; and

means for modifying said mask pattern for each feature categorized into a predefined distinct zone of said plurality of distinct zones.

8. The apparatus for generating masks according to claim 7, wherein said plurality of distinct zones comprises:

a first zone in which features having a critical dimension less than or equal to a first predetermined amount can be imaged utilizing chromeless phase lithography techniques;

a second zone in which features having a critical dimension greater than said first predetermined amount and less than a second predetermined amount can be imaged utilizing a combination of chromeless phase lithography techniques and chrome; and

a third zone in which features having a critical dimensions greater than said second predetermined amount can be imaged utilizing chrome.

9. The apparatus for generating masks according to claim 8, wherein at least one of said features in said first zone is implemented in said mask as adjacent phase edges etched in said a wafer.

10. The apparatus for generating masks according to claim 8, wherein at least one of said features in said second zone is implemented in said mask as adjacent phase edges etched in a substrate, with chrome patches disposed on an upper surface of said substrate remaining between said adjacent phase edges.

11. The apparatus for generating mask according to claim 10, wherein said chrome patches operate to control the percentage transmission of a light source incident on said mask.

12. The apparatus for generating masks according to claim 8, further comprising:

means for compiling the features contained in said first zone, and the chromeless phase components of the features contained in said second region,

means for generating a first mask for imaging the chromeless phase components contained in said first zone and said second zone,

means for compiling the chrome components of the features contained in said second zone, and the chrome components of the features contained in said third region, and

means for generating a second mask for imaging the chrome components contained in said second zone and said third zone.

13. A computer program product for controlling a computer comprising a recording medium readable by the computer, means recorded on the recording medium for directing the computer to generate files corresponding to masks for printing a pattern comprising a plurality of features having varying critical dimensions, said generation of said files comprising the steps of:

obtaining data representing said pattern;

defining a plurality of distinct zones based on the critical dimensions of said plurality of features;

categorizing each of said features into one of said plurality of distinct zones; and

modifying said mask pattern for each feature categorized into a predefined distinct zone of said plurality of distinct zones.

14. The computer program product according to claim 13, wherein said plurality of distinct zones comprises:

a first zone in which features having a critical dimension less than or equal to a first predetermined amount can be imaged utilizing chromeless phase lithography techniques;

a second zone in which features having a critical dimension greater than said first predetermined amount and less than a second predetermined amount can be imaged utilizing a combination of chromeless phase lithography techniques and chrome; and

a third zone in which features having a critical dimensions greater than said second predetermined amount can be imaged utilizing chrome.

15. The computer program product according to claim 14, wherein at least one of said features in said first zone is implemented in said mask as adjacent phase edges etched in said a wafer.

16. The computer program product according to claim 14, wherein at least one of said features in said second zone is implemented in said mask as adjacent phase edges etched in a substrate, with chrome patches disposed on an upper surface of said substrate remaining between said adjacent phase edges.

17. The computer program product according to claim 16, wherein said chrome patches operate to control the percentage transmission of a light source incident on said mask.

18. The computer program product according to claim 14, said generation of files further comprising the steps of:

compiling the features contained in said first zone, and the chromeless phase components of the features contained in said second region,

generating a first mask for imaging the chromeless phase components contained in said first zone and said second zone,

compiling the chrome components of the features contained in said second zone, and the chrome components of the features contained in said third region,

generating a second mask for imaging the chrome components contained in said second zone and said third zone.